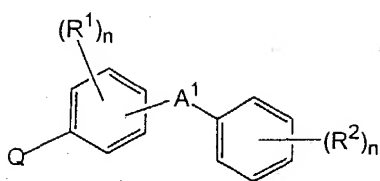
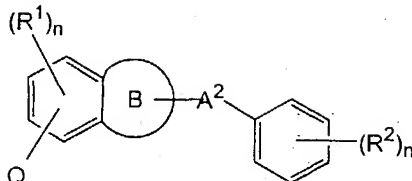


**WHAT IS CLAIMED:**

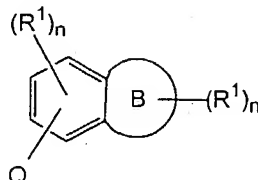
1. A compound having the formula:



(I)



(II)



(III)

5

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is  $\text{CF}_3\text{SO}_2$ ,  $\text{CF}_3\text{SO}_2\text{NR}^3$ ,  $\text{CF}_3\text{SO}_2\text{R}^4$  or  $\text{CF}_3\text{SO}_2\text{N}(\text{R}^3)\text{R}^4$ , wherein  $\text{R}^3$  is H, alkoxy, acyl or  $\text{C}_1$ - $\text{C}_3$  alkyl, each of which may be substituted or unsubstituted, and  $\text{R}^4$  is methylene which may be substituted or unsubstituted;

- 10 each  $\text{R}^1$  is independently  $\text{C}_1$ - $\text{C}_3$  alkyl,  $\text{C}_1$ - $\text{C}_3$  haloalkyl, CN,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}^5$ , H, halo,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR, OH, NHR,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}^5$ ,  $\text{NO}_2$ ,  $\text{NHSO}_2\text{R}^5$ ,  $\text{SO}_2\text{R}^5$ ,  $\text{R}^4\text{SO}_2\text{CF}_3$  or tetrazole, wherein  $\text{R}^5$  is  $\text{CF}_3$ ,  $\text{C}_1$ - $\text{C}_3$  alkyl, NHR and wherein R is H,  $\text{C}_1$ - $\text{C}_3$  alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

- 15 each  $\text{R}^2$  is independently  $\text{C}_1$ - $\text{C}_3$  alkyl,  $\text{C}_1$ - $\text{C}_3$  haloalkyl, CN,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}^5$ , H, halo,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR, OH, NHR,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}^5$ ,  $\text{NO}_2$ ,  $\text{NHSO}_2\text{R}^5$ ,  $\text{SO}_2\text{R}^5$ , tetrazole, or  $\text{X}^1\text{-R}^6\text{-X}^2$ , wherein  $\text{X}^1$  is present or absent and if present is O, N,  $(\text{C}=\text{O})$ ,  $(\text{C}=\text{O})\text{NH}$ ,  $\text{NH}(\text{C}=\text{O})$ ,  $\text{SO}_2\text{NH}$ ,  $\text{NHSO}_2$ ,  $\text{R}^6$  is  $\text{C}_1$ - $\text{C}_3$  alkylene which may be substituted or unsubstituted and  $\text{X}^2$  is  $\text{CF}_3$ ,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}^5$ , H,  $\text{NH}(\text{C}=\text{O})\text{R}^5$ ,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NHSO}_2\text{R}^5$ ,  $\text{NRR}^3$ ,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR,  $\text{SO}_2\text{R}^5$ , tetrazole;

- 20 each n is independently from 0 to 3;

ring B is an aryl, carbocyclic, heteroaryl, heterocyclic or phenyl ring which may be substituted or unsubstituted;

A<sup>1</sup> is a linkage in which the shortest path is 2-8 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen or oxygen, or combination of nitrogen, oxygen and sulfur provided no two heteroatoms are adjacently linked in a linear linkage; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be acylalkyl, alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, C<sub>1</sub>-C<sub>6</sub> alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, C<sub>1</sub>-C<sub>6</sub> N-sulfonamido, C<sub>3</sub>-C<sub>7</sub> N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, ortho or para aryldioxy, substituted meta-aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C<sub>3</sub>-C<sub>7</sub> C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, C<sub>2</sub>-C<sub>6</sub> S-sulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, C<sub>3</sub>-C<sub>6</sub> ureido, which may be substituted or unsubstituted; and

A<sup>2</sup> is a linkage in which the shortest path is 0-6 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be single atom C, O, S or N which may be substituted or unsubstituted; the linkage may be acylalkyl, alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl,

alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl,  
 alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylarylloxy, alkylene,  
 alkylenediamine, alkylenedioxy, alkylloxy, alkylloxyaryl, alkylloxyarylalkylloxy,  
 alkylloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-  
 5 sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl,  
 aminoalkylarylalkylamino, aminoalkylarylloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl,  
 aminoarylcarbonyl, aminoarylloxy, aminoarylloxyalkyl, aminoarylsulfonyl, aryl, arylamino,  
 ortho or para aryldioxy, substituted meta-aryldioxy, aryldiamine, aryloxy, aryloxyalkyl,  
 aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole,  
 10 benzo[b]furan, benzo[b]thiophene, C-amido, carbonylarylamino, carbonylarylcarbonyl,  
 carbonylarylloxy, chromene, cycloalkylene, furan, haloalkyl, imidazole, imidazolidine,  
 imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane,  
 parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole,  
 pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido,  
 15 sulfonylalkyl, sulfonylarylamino, sulfonylarylloxy, sulfonylarylsulfonyl, thiadiazole, thiazole,  
 thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or  
 unsubstituted.

2. The compound of claim 1 wherein Q is  $\text{CF}_3\text{SO}_2$ .

3. The compound of claim 1 wherein Q is  $\text{CF}_3\text{SO}_2\text{NR}^3$ .

4. The compound of claim 1 wherein Q is  $\text{CF}_3\text{SO}_2\text{R}^4$ .

5. The compound of claim 1 wherein Q is  $\text{CF}_3\text{SO}_2\text{N}(\text{R}^3)\text{R}^4$ .

6. The compound of claim 1 wherein the compound has formula I.

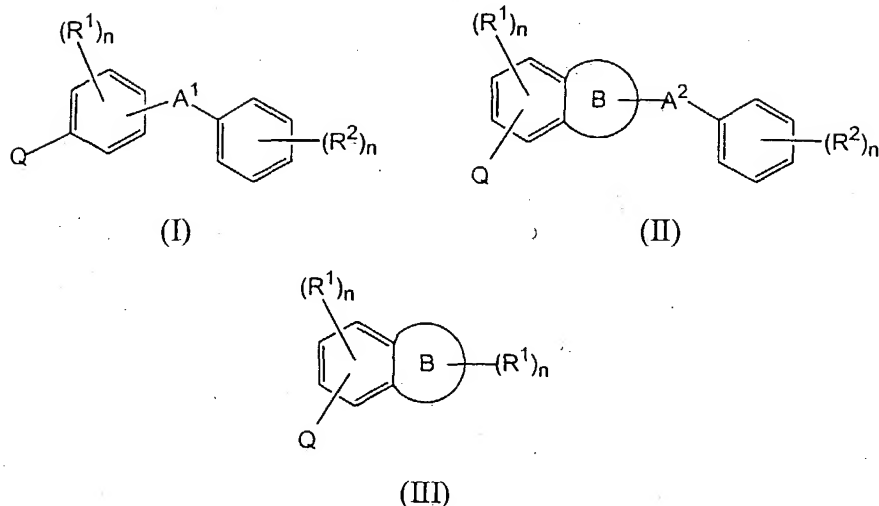
7. The compound of claim 1 wherein the compound has formula II.

8. The compound of claim 1 wherein the compound has formula III.

9. The compound of claim 1 wherein  $R^2$  is  $SO_2R^5$ ,  $NHSO_2R^5$  or  $CF_3SO_2R^4$ .

10. A compound having the formula:

5



or a pharmaceutically acceptable salt or solvate thereof, wherein:

$Q$  is  $CF_3SO_2$ ;

each  $R^1$  is independently  $CF_3$ ,  $(C=O)OR$ ,  $(C=O)R^5$ ,  $H$ , halo,  $NHR$ ,  $NH(C=O)OR$ ,  $NH(C=O)R^5$ ,  $NHSO_2R^5$ ,  $NO_2$ ,  $O(C=O)R$ ,  $OH$ ,  $OR$ ,  $SO_2R^5$  or tetrazole, wherein  $R^5$  is  $CF_3$ ,  $C1-C3$  alkyl,  $NHR$  and wherein  $R$  is  $H$ ,  $C1-C3$  alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

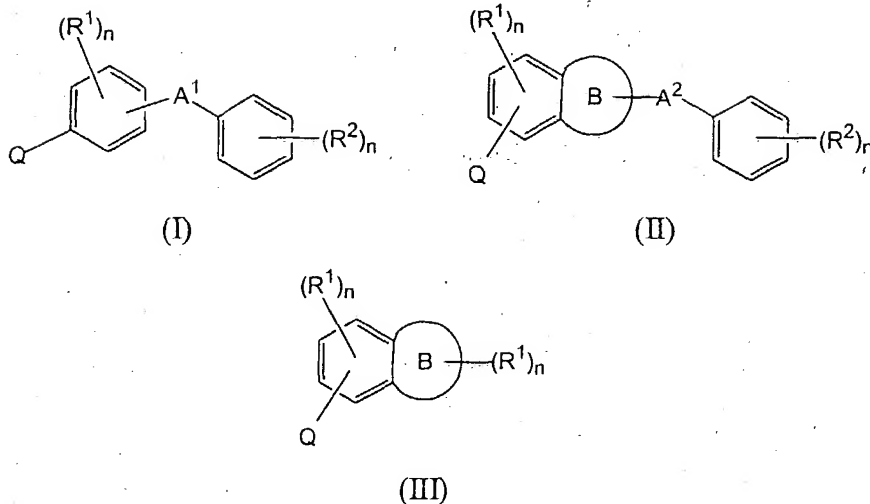
each  $R^2$  is independently  $(C=O)OR$ ,  $(C=O)R^5$ ,  $NH(C=O)OR$ ,  $NH(C=O)R^5$ ,  $NHR$ ,  $NHSO_2R^5$ ,  $NO_2$ ,  $-R^6-(C=O)OR$ ,  $-R^6-NRR^3$ ,  $-R^6$ -tetrazole, or tetrazole and  $R^6$  is  $C1-3$  alkylene which may be substituted or unsubstituted;

each  $n$  is independently from 0 to 2;

ring  $B$  is phenyl or heteroaryl which may be substituted or unsubstituted; and

linkage  $A^1$  is  $C2-C4$  alkoxy,  $C2-C4$  alkoxyalkyl,  $C2-C4$  alkylenedioxy,  $C2-C4$  alkylaminoalkyl,  $C2-C4$  alkylenediamine,  $C3-C4$  C-amido,  $C3-C4$  N-amido,  $C3-C4$  ureido,  $C1-C3$  N-sulfonamido,  $C2-C3$  S-sulfonamido, aryldioxy, aryldiamine, aryl, alkylarylalkyl, imidazole, oxazole, oxadiazole, pyrazole, pyrazolidine, pyrrole or triazole.

11. A compound having the formula:



or a pharmaceutically acceptable salt or solvate thereof, wherein:

5 Q is  $CF_3SO_2NR^3$ ,  $CF_3SO_2R^4$  or  $CF_3SO_2N(R^3)R^4$ , wherein  $R^3$  is H, alkoxy, acyl or C1-C3 alkyl each of which may be substituted or unsubstituted and  $R^4$  is methylene which may be substituted or unsubstituted;

each  $R^1$  is independently  $CF_3$ ,  $(C=O)OR$ ,  $(C=O)R^5$ , H, halo,  $NHR$ ,  $NH(C=O)OR$ ,  $NH(C=O)R^5$ ,  $NHSO_2R^5$ ,  $NO_2$ ,  $O(C=O)R$ , OH, OR,  $SO_2R^5$  or tetrazole,

10 wherein  $R^5$  is  $CF_3$ , C1-C3 alkyl,  $NHR$  and wherein  $R$  is H, C1-C3 alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

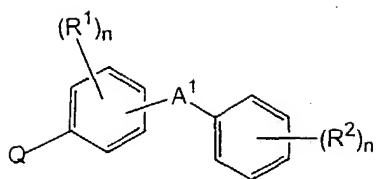
each  $R^2$  is independently  $(C=O)OR$ ,  $(C=O)R^5$ ,  $NH(C=O)OR$ ,  $NH(C=O)R^5$ ,  $NHR$ ,  $NHSO_2R^5$ ,  $NO_2$ ,  $SO_2R^5$ ,  $-R^6-(C=O)OR$ ,  $-R^6-NRR^3$ ,  $-R^6$ -tetrazole, or tetrazole and  $R^6$  is C1-3 alkylene which may be substituted or unsubstituted;

15 each  $n$  is independently from 0 to 2;

ring B is phenyl or heteroaryl which may be substituted or unsubstituted; and

linkage  $A^1$  is C2-C4 alkoxy, C2-C4 alkoxyalkyl, C2-C4 alkylenedioxy, C2-C4 alkylaminoalkyl, C2-C4 alkylenediamine, C3-C4 C-amido, C3-C4 N-amido, C3-C4 ureido, C1-C3 N-sulfonamido, C2-C3 S-sulfonamido, aryldioxy, aryldiamine, aryl, alkylarylalkyl, 20 imidazole, oxazole, oxadiazole, pyrazole, pyrazolidine, pyrrole or triazole.

12. A compound having the formula:



(I)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF<sub>3</sub>SO<sub>2</sub>;

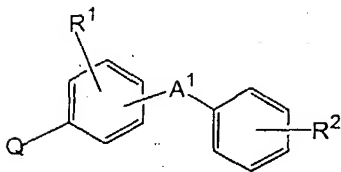
5 each R<sup>1</sup> is independently H, NHR, NO<sub>2</sub> or OR;

each R<sup>2</sup> is independently (C=O)OR, NHSO<sub>2</sub>R<sup>5</sup>, or SO<sub>2</sub>R<sup>5</sup>;

each n is independently from 0 to 2; and the linkage A<sup>1</sup> is alkylarylalkyl, C<sub>2</sub>-C<sub>4</sub> alkoxyalkyl, C<sub>2</sub>-C<sub>4</sub> alkylenedioxy, aryl, aryldiamine, aryldioxy, or oxadiazole which may be substituted or unsubstituted or A<sup>1</sup> is unsubstituted or monosubstituted C<sub>2</sub>-C<sub>4</sub> N-amido.

10

13. The compound of claim 11 having the formula:



(IV)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

15

R<sup>1</sup> is H or NO<sub>2</sub>;

R<sup>2</sup> is (C=O)OR, NHSO<sub>2</sub>R<sup>5</sup> or SO<sub>2</sub>R<sup>5</sup>; and

the linkage A<sup>1</sup> is C<sub>2</sub>-C<sub>4</sub> alkoxyalkyl, aryldioxy, aryl, alkylarylalkyl or oxadiazole.

14. The compound of claim 12 wherein the compound is:

20

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;

N,N-Bis(4-trifluoromethylsulfonylbenzyl)benzamide;

- 1,2-Bis(4-trifluoromethylsulfonylphenyl)ethane;  
 N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;  
 N-(4-Trifluoromethylsulfonylbenzyl)benzamide;  
 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;  
 5 [3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl ester;  
 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;  
 1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;  
 4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl  
 10 ester;  
 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;  
 4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;  
 1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-  
 1*H*-pyrazole-3-carboxylic acid methyl ester;  
 15 {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester;  
 4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;  
 {4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid  
 ethyl ester;  
 20 *N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
 25 3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzene;  
 [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine;  
*N*-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)-  
 30 acetamide;

2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;

{2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

{3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

5 {4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;

3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;

*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;

10 *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;

15 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl ester;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-benzamide;

20 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxy-phenyl)-benzamide;

3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-benzoic acid ethyl ester;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-yl-ethyl)-benzamide;

25 *N*-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide;

1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;

[2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic acid methyl ester;

30 *N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;



*N*-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-*N*-(2-hydroxyethyl)-benzamide;

[2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic acid ethyl ester;

5 [2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic acid ethyl ester;

[2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic acid ethyl ester;

10 *N*-Cyclohexyl-*N*-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;

[2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic acid ethyl ester;

[2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic acid ethyl ester;

15 {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid;

4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid;

2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;

1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine;

20 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine;

[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)-amine;

1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-ol;

25 [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-amine;

1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-ol;

30 4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-benzenesulfonamide; or

4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-benzenesulfonamide.

15. The compound of claim 13 wherein the compound is:

- 5 1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane;
- 1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane;
- 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane;
- 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane;
- 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane;
- 10 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
- 1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene;
- Bis(4-trifluoromethylsulfonamidophenyl) ether;
- 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
- 2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole;
- 15 Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene;
- 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid;
- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;
- 20 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;
- 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 25 4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid;
- 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid;
- 4-[[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl]-benzoic acid;
- 30 (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid *tert*-butyl ester;

1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;  
 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid;  
*N,N*-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide;  
 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;  
 5 3-( {6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl} -  
 amino)-benzoic acid;

1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-  
 carboxylic acid ethyl ester;

10 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl  
 ester;

1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-  
 carboxylic acid;

1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

15 1-Carboxymethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic  
 acid ethyl ester;

1-*tert*-Butoxycarbonylmethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-  
 carboxylic acid ethyl ester;

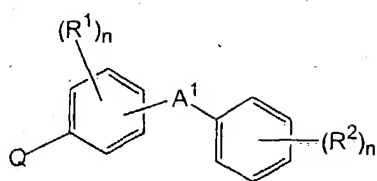
1-Carboxymethyl-5-(*N,N*- ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic  
 acid;

20 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid  
 ethyl ester;

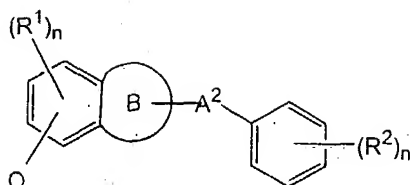
1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or

1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.

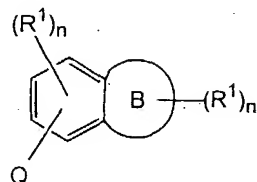
25 16. A pharmaceutical composition comprising a compound having the formula:



(I)



(II)



(III)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is  $\text{CF}_3\text{SO}_2$ ,  $\text{CF}_3\text{SO}_2\text{NR}^3$ ,  $\text{CF}_3\text{SO}_2\text{R}^4$  or  $\text{CF}_3\text{SO}_2\text{N}(\text{R}^3)\text{R}^4$ , wherein  $\text{R}^3$  is H, alkoxy, acyl or  $\text{C}_1$ - $\text{C}_3$  alkyl, each of which may be substituted or unsubstituted, and  $\text{R}^4$  is methylene which may be substituted or unsubstituted;

each  $\text{R}^1$  is independently  $\text{C}_1$ - $\text{C}_3$  alkyl,  $\text{C}_1$ - $\text{C}_3$  haloalkyl, CN,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ , H, halo, NHR,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ ,  $\text{NO}_2$ ,  $\text{NHSO}_2\text{R}_5$ ,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR, OH,  $\text{SO}_2\text{R}_5$ ,  $\text{R}_4\text{SO}_2\text{CF}_3$  or tetrazole, wherein  $\text{R}_5$  is  $\text{CF}_3$ ,  $\text{C}_1$ - $\text{C}_3$  alkyl, NHR and wherein R is H,  $\text{C}_1$ - $\text{C}_3$  alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

each  $\text{R}^2$  is independently  $\text{C}_1$ - $\text{C}_3$  alkyl,  $\text{C}_1$ - $\text{C}_3$  haloalkyl, CN,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ , H, halo,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR, OH, NHR,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ ,  $\text{NO}_2$ ,  $\text{NHSO}_2\text{R}_5$ ,  $\text{SO}_2\text{R}_5$ , tetrazole, or  $\text{X}_1\text{-R}_6\text{-X}_2$  wherein  $\text{X}_1$  may be present or absent and if present is O, N,  $(\text{C}=\text{O})$ ,  $(\text{C}=\text{O})\text{NH}$ ,  $\text{NH}(\text{C}=\text{O})$ ,  $\text{SO}_2\text{NH}$ ,  $\text{NHSO}_2$ ;

$\text{R}_6$  is  $\text{C}_1$ -3 alkylene which may be substituted or unsubstituted;

$\text{X}_2$  is  $\text{CF}_3$ ,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ , H,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ ,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NHSO}_2\text{R}_5$ ,  $\text{NRR}_3$ ,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR,  $\text{SO}_2\text{R}_5$ , tetrazole;

each n is independently from 0 to 3;

ring B is an aryl, carbocyclic, heteroaryl, heterocyclic or phenyl ring which may be substituted or unsubstituted;

$\text{A}^1$  is a linkage in which the shortest path is 2-8 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen or oxygen, or combination of nitrogen, oxygen and sulfur provided no two

heteroatoms are adjacently linked in a linear linkage; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be acylalkyl, alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, C1-C6 alkylsulfonamino, alkylthio, alkylthioalkyl, alkynylene, C1-C6 N-sulfonamido, C3-C7 N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C3-C7 C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, C2-C6 S-sulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, C3-C6 ureido, which may be substituted or unsubstituted;

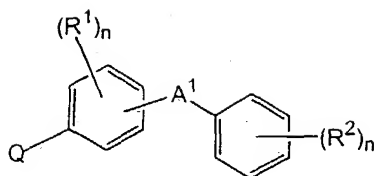
$A^2$  is a linkage in which the shortest path is 0-6 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be single atom C, O, S or N which may be substituted or unsubstituted; the linkage may be acylalkyl, alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, alkylsulfonamino, alkylthio, alkylthioalkyl, alkynylene, N-

sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, ortho or para aryldioxy, substituted meta-aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C-amido, carbonylarylamine, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido, sulfonylalkyl, sulfonylarylamine, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted.

- 15           17.     The pharmaceutical composition of claim 16 wherein:  
               Q is  $\text{CF}_3\text{SO}_2$  or  $\text{CF}_3\text{SO}_2\text{NH}$ ;  
               each R1 is independently  $\text{CF}_3$ ,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ , H, halo, NHR,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ ,  $\text{NHSO}_2\text{R}_5$ ,  $\text{NO}_2$ ,  $\text{O}(\text{C}=\text{O})\text{R}$ , OH, OR,  $\text{SO}_2\text{R}_5$  or tetrazole;  
               each R2 is independently  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ ,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ , NHR,  $\text{NHSO}_2\text{R}_5$ ,  $\text{NO}_2$ ,  $\text{SO}_2\text{R}_5$ ,  $-\text{R}_6-(\text{C}=\text{O})\text{OR}$ ,  $-\text{R}_6-\text{NRR}_3$ ,  $-\text{R}_6$ -tetrazole or tetrazole;  
               each n is independently from 0 to 2;  
               ring B is phenyl or heteroaryl which may be substituted or unsubstituted; and  
               linkage A1 is C2-C4 alkoxy, C2-C4 alkoxyalkyl, C2-C4 alkylenedioxy, C2-C4 alkylaminoalkyl, C2-C4 alkylenediamine, C3-C4 C-amido, C3-C4 N-amido, C3-C4 ureido, C1-C3 N-sulfonamido, C2-C3 S-sulfonamido, aryldioxy, aryldiamine, aryl, alkylarylalkyl, imidazole, oxazole, oxadiazole, pyrazole, pyrazolidine, pyrrole or triazole.

              18.     The pharmaceutical composition of claim 17 wherein the compound has the formula:

30



(I)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF<sub>3</sub>SO<sub>2</sub> or CF<sub>3</sub>SO<sub>2</sub>NH;

each R<sup>1</sup> is independently H, NHR, NO<sub>2</sub> or OR;

each R<sup>2</sup> is independently (C=O)OR, or NHSO<sub>2</sub>R<sup>5</sup> or SO<sub>2</sub>R<sup>5</sup>;

5 each n is independently from 0 to 2; and

the linkage A<sup>1</sup> is alkylarylalkyl, C<sub>2</sub>-C<sub>4</sub> alkoxyalkyl, C<sub>2</sub>-C<sub>4</sub> alkylenedioxy, aryl, aryldiamine, aryldioxy or oxadiazole.

19. The pharmaceutical composition of claim 16 wherein the compound is:

10

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;

N,N-Bis(4-trifluoromethylsulfonylbenzyl)benzamide;

1,2-Bis(4-trifluoromethylsulfonylphenyl)ethane;

N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;

15

N-(4-Trifluoromethylsulfonylbenzyl)benzamide;

3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;

[3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl ester;

3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;

20

1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;

4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;

4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;

4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;

25

1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-

1H-pyrazole-3-carboxylic acid methyl ester;

{4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-  
acetic acid ethyl ester;

4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;

{4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid  
5 ethyl ester;

*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

10 *N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonyl-  
phenoxy)-benzene;

[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine;

15 *N*-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)-  
acetamide;

2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl  
ester;

{2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

20 {3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

{4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;

3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;

25 *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

30 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl  
ester;



4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;  
4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-  
benzamide;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxy-  
5 phenyl)-benzamide;

3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-  
benzoic acid ethyl ester;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-yl-  
ethyl)-benzamide;

10 *N*-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide;

1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;

[2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic  
acid methyl ester;

*N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-  
15 benzamide;

*N*-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-*N*-(2-hydroxy-  
ethyl)-benzamide;

[2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-  
acetic acid ethyl ester;

20 [2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic  
acid ethyl ester;

[2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-  
acetic acid ethyl ester;

*N*-Cyclohexyl-*N*-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-  
25 phenyl)-methyl]-benzamide;

[2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic  
acid ethyl ester;

[2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-  
acetic acid ethyl ester;

30 {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-  
acetic acid;

4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid;  
 2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;  
 1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine;  
 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine;  
 5 [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)-  
 amine;  
 1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-  
 ol;  
 [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-  
 10 amine;  
 1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-  
 ol;  
 4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-  
 benzenesulfonamide; or  
 15 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-  
 benzenesulfonamide.

20. The pharmaceutical composition of claim 16 wherein the compound is:

1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane;  
 20 1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane;  
 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane;  
 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane;  
 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane;  
 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;  
 25 1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene;  
 Bis(4-trifluoromethylsulfonamidophenyl) ether;  
 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;  
 2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole;  
 Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene;  
 30 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;  
 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

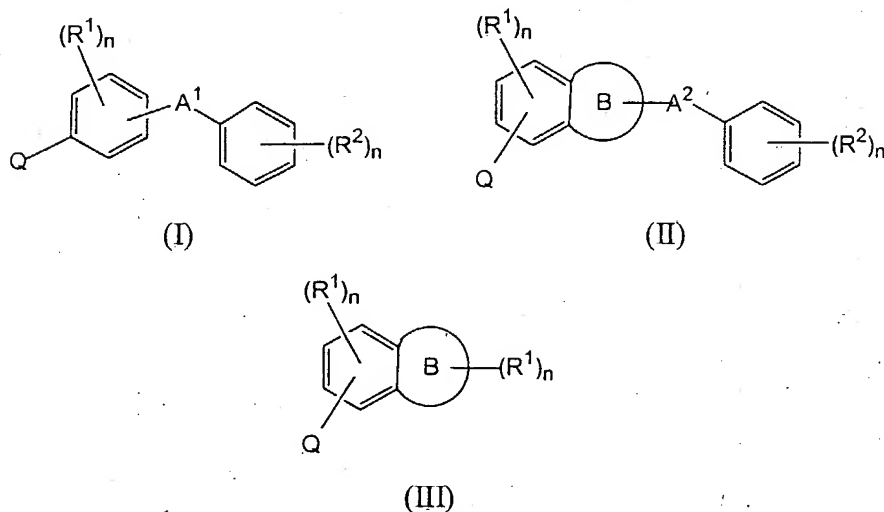
- (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid;  
 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;  
 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;  
 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-  
 5 benzoic acid;  
 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;  
 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;  
 4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic  
 acid;  
 10 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic  
 acid;  
 4-[[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl]-  
 benzoic acid;  
 (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid *tert*-butyl ester;  
 15 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;  
 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid;  
*N,N*-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide;  
 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;  
 3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}-  
 20 amino)-benzoic acid;  
 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-  
 carboxylic acid ethyl ester;  
 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl  
 ester;  
 25 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-  
 carboxylic acid;  
 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;  
 1-Carboxymethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic  
 acid ethyl ester;  
 30 1-*tert*-Butoxycarbonylmethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-  
 carboxylic acid ethyl ester;

1-Carboxymethyl-5-(*N,N*-difluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid;

1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;

- 5 1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or  
1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.

21. A method for treating a protein tyrosine phosphatase signal transduction associated disorder in a mammal which comprises administering to the mammal  
10 therapeutically effective amount of a compound having the formula:



or a pharmaceutically acceptable salt or solvate thereof, wherein:

- 15  $Q$  is  $CF_3SO_2$ ,  $CF_3SO_2NR^3$ ,  $CF_3SO_2R^4$  or  $CF_3SO_2N(R^3)R^4$ , wherein  $R^3$  is H, alkoxy, acyl or C<sub>1</sub>-C<sub>3</sub> alkyl, each of which may be substituted or unsubstituted, and  $R^4$  is methylene which may be substituted or unsubstituted;

- each  $R^1$  is independently C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> haloalkyl, CN, (C=O)OR, (C=O)R<sup>5</sup>, H, halo, NHR, NH(C=O)OR, NH(C=O)R<sup>5</sup>, NO<sub>2</sub>, NHSO<sub>2</sub>R<sup>5</sup>, O(C=O)R, OH, OR, SO<sub>2</sub>R<sup>5</sup>, R<sup>4</sup>SO<sub>2</sub>CF<sub>3</sub> or tetrazole, wherein  $R^5$  is CF<sub>3</sub>, C<sub>1</sub>-C<sub>3</sub> alkyl, NHR and wherein R is H, C<sub>1</sub>-C<sub>3</sub>  
20 alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

each  $R^2$  is independently C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> haloalkyl, CN, (C=O)OR, (C=O)R<sup>5</sup>, H, halo, O(C=O)R, OR, OH, NHR, NH(C=O)OR, NH(C=O)R<sup>5</sup>, NO<sub>2</sub>, NHSO<sub>2</sub>R<sup>5</sup>, SO<sub>2</sub>R<sup>5</sup>,

tetrazole, or X1-R6-X2, wherein X1 may be present or absent and, if present is O, N, (C=O), (C=O)NH, NH(C=O), SO<sub>2</sub>NH, NHSO<sub>2</sub>, R6 is C1-3 alkylene which may be substituted or unsubstituted and X2 is CF<sub>3</sub>, (C=O)OR, (C=O)R<sub>5</sub>, H, NH(C=O)R<sub>5</sub>, NH(C=O)OR, NHSO<sub>2</sub>R<sub>5</sub>, NRR<sub>3</sub>, O(C=O)R, OR, SO<sub>2</sub>R<sub>5</sub>, tetrazole;

5 each n is independently from 0 to 3;

ring B is an aryl, carbocyclic, heteroaryl, heterocyclic or phenyl ring which may be substituted or unsubstituted;

A<sup>1</sup> is a linkage in which the shortest path is 2-8 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with  
 10 a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be acylalkyl, alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl,  
 15 alkylaminoarylaminomalkyl, alkylaryl, alkylarylalkyl, alkylarylaminom, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl,  
 20 aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C-amido, carbonylarylaminom, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole,  
 25 isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted;

30 A<sup>2</sup> is a linkage in which the shortest path is 0-6 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with

a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be single atom C, O, S or N which may be substituted or unsubstituted; the linkage may be acylalkyl,

5 alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-  
 10 sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, ortho or para aryldioxy, substituted meta-aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole,  
 15 benzo[b]furan, benzo[b]thiophene, C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido,  
 20 sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted

and a pharmaceutically acceptable carrier or excipient;

wherein said compound regulates, inhibits or modulates protein tyrosine phosphatase  
 25 signal transduction.

22. The method of claim 21 wherein the protein tyrosine phosphatase signal transduction is associated with cancer, a solid tumor, glioma, melanoma, Kaposi's sarcoma, hemangioma, ovarian cancer, breast cancer, lung cancer, pancreatic cancer, liver cancer,  
 30 prostate cancer, colon cancer, or epidermoid cancer.

23. The method of claim 21 wherein the protein tyrosine phosphatase signal transduction is associated with diabetes.

24. The method of claim 21 wherein the protein tyrosine phosphatase signal transduction is associated with neurological degenerative diseases.

25. The method of claim 21 wherein the protein tyrosine phosphatase signal transduction is associated with osteoporosis.

26. The method of claim 21, 22, 23, 24 or 25 wherein the mammal is a human.

27. The method of claim 21 wherein Q is  $\text{CF}_3\text{SO}_2$ .

28. The method of claim 21 wherein Q is  $\text{CF}_3\text{SO}_2\text{NR}^3$ .

29. The method of claim 21 wherein Q is  $\text{CF}_3\text{SO}_2\text{R}^4$ .

30. The method of claim 21 wherein Q is  $\text{CF}_3\text{SO}_2\text{N}(\text{R}^3)\text{R}^4$ .

31. The method of claim 21 wherein the compound has formula I.

32. The method of claim 21 wherein the compound has formula II.

33. The method of claim 21 wherein the compound has formula III.

34. The method of claim 21 wherein  $\text{R}^2$  is  $\text{SO}_2\text{R}^5$ ,  $\text{NHSO}_2\text{R}^5$  or  $\text{CF}_3\text{SO}_2\text{R}^4$ .

35. The method of claim 21 wherein

Q is  $\text{CF}_3\text{SO}_2$  or  $\text{CF}_3\text{SO}_2\text{NH}$ ;

each  $\text{R}^1$  is independently  $\text{CF}_3$ ,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}^5$ , H, halo,  $\text{NHR}$ ,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}^5$ ,  $\text{NHSO}_2\text{R}^5$ ,  $\text{NO}_2$ ,  $\text{O}(\text{C}=\text{O})\text{R}$ , OH, OR,  $\text{SO}_2\text{R}^5$  or tetrazole;

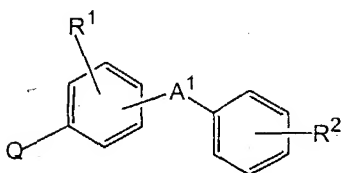
each R<sub>2</sub> is independently (C=O)OR, (C=O)R<sub>5</sub>, NH(C=O)OR, NH(C=O)R<sub>5</sub>, NHR, NHSO<sub>2</sub>R<sub>5</sub>, NO<sub>2</sub>, SO<sub>2</sub>R<sub>5</sub>, -R<sub>6</sub>-(C=O)OR, -R<sub>6</sub>-NRR<sub>3</sub>, -R<sub>6</sub>-tetrazole or tetrazole;

each n is independently from 0 to 2;

ring B is phenyl or heteroaryl which may be substituted or unsubstituted; and

- 5 linkage A<sub>1</sub> is C1-C4 alkoxy, C2-C4 alkoxyalkyl, C2-C4 alkylendioxy, C2-C4 alkylaminoalkyl, C2-C4 alkylenediamine, C1-C4 C-amido, C1-C4 N-amido, C1-C4 ureido, C0-C3 N-sulfonamido, C0-C3 S-sulfonamido, aryldioxy, aryldiamine, aryl, alkylarylalkyl, imidazole, oxazole, oxadiazole, pyrazole, pyrazolidine, pyrrole or triazole.

- 10 36. The method of claim 21 wherein the compound has the formula:



(IV)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is CF<sub>3</sub>SO<sub>2</sub> or CF<sub>3</sub>SO<sub>2</sub>NH;

- 15 R<sub>1</sub> is H or NO<sub>2</sub>;

R<sub>2</sub> is (C=O)OR, NHSO<sub>2</sub>R<sub>5</sub> or SO<sub>2</sub>R<sub>5</sub>; and

the linkage A<sub>1</sub> is C2-C4 alkoxyalkyl, aryldioxy, aryl, alkylarylalkyl, C1-C4 N-amido or oxadiazole.

- 20 37. The method of claim 21 wherein the compound is:

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;

N,N-Bis(4-trifluoromethylsulfonylbenzyl)benzamide;

1,2-Bis(4-trifluoromethylsulfonylphenyl)ethane;

- 25 N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;

N-(4-Trifluoromethylsulfonylbenzyl)benzamide;

Bis(4-Trifluoromethylsulfonylphenyl) disulfide;



- Bis-(2-Nitro-4-trifluoromethylsulfonylphenyl) disulfide;  
 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;  
 [3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl ester;  
 5 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;  
 1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;  
 4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;  
 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;  
 10 4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;  
 1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-1*H*-pyrazole-3-carboxylic acid methyl ester;  
 {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester;  
 15 4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;  
 {4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester;  
*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
 20 *N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
 3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzene;  
 25 [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine;  
*N*-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)-acetamide;  
 2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;  
 30 {2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

{3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

{4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;

3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;

5 *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;

10 *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl ester;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;

15 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-ylbenzamide;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxyphenyl)-benzamide;

3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-benzoic acid ethyl ester;

20 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-ylethyl)-benzamide;

*N*-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide;

1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;

25 [2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid methyl ester;

*N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;

*N*-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-*N*-(2-hydroxyethyl)-benzamide;

30 [2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic acid ethyl ester;

[2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic acid ethyl ester;

[2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic acid ethyl ester;

5        *N*-Cyclohexyl-*N*-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;

[2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic acid ethyl ester;

10        [2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic acid ethyl ester;

{4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid;

4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid;

2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;

15        1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine;

4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine;

[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)-amine;

20        1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-ol;

[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-amine;

1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-ol;

25        4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-benzenesulfonamide;

4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-benzenesulfonamide; or

Bis-{{4-(2-nitro-4-trifluoromethanesulfonyl)-phenoxy}-phenyl} sulfone.

30

38.     The method of claim 21 wherein the compound is:

- 1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane;
- 1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane;
- 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane;
- 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane;
- 5 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane;
- 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
- 1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene;
- Bis(4-trifluoromethylsulfonamidophenyl) ether;
- 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
- 10 2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole;
- Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene;
- 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid;
- 15 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;
- 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;
- 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 20 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid;
- 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid;
- 25 4-[[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl]-benzoic acid;
- (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid *tert*-butyl ester;
- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid;
- 30 *N,N*-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide;
- 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;

3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}-amino)-benzoic acid;

1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;

5 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;

1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

10 1-Carboxymethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;

1-*tert*-Butoxycarbonylmethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;

15 1-Carboxymethyl-5-(*N,N*- ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid;

1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;

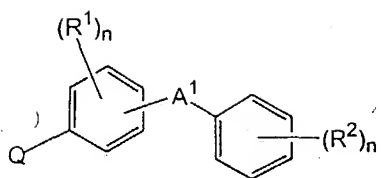
1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or

1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.

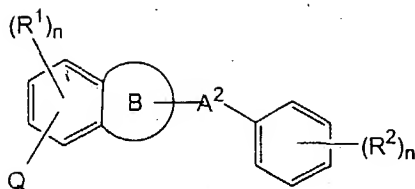
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39. A method for treating, alleviating or preventing cancer in a mammal which comprises administering to a mammal in need thereof a therapeutically effective amount of a compound having the formula:

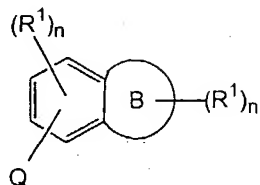
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(I)



(II)



(III)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is  $\text{CF}_3\text{SO}_2$ ,  $\text{CF}_3\text{SO}_2\text{NR}^3$ ,  $\text{CF}_3\text{SO}_2\text{R}^4$  or  $\text{CF}_3\text{SO}_2\text{N}(\text{R}^3)\text{R}^4$ , wherein  $\text{R}^3$  is H, alkoxy, acyl or  $\text{C}_1$ - $\text{C}_3$  alkyl, each of which may be substituted or unsubstituted, and  $\text{R}^4$  is methylene which may be substituted or unsubstituted;

each  $\text{R}^1$  is independently  $\text{C}_1$ - $\text{C}_3$  alkyl,  $\text{C}_1$ - $\text{C}_3$  haloalkyl, CN,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ , H, halo,  $\text{NHR}$ ,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ ,  $\text{NO}_2$ ,  $\text{NHSO}_2\text{R}_5$ ,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR, OH,  $\text{SO}_2\text{R}_5$ ,  $\text{R}_4\text{SO}_2\text{CF}_3$  or tetrazole, wherein  $\text{R}_5$  is  $\text{CF}_3$ ,  $\text{C}_1$ - $\text{C}_3$  alkyl,  $\text{NHR}$  and wherein R is H,  $\text{C}_1$ - $\text{C}_3$  alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

each  $\text{R}^2$  is independently  $\text{C}_1$ -3 alkyl,  $\text{C}_1$ - $\text{C}_3$  haloalkyl, CN,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ , H, halo,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR, OH,  $\text{NHR}$ ,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ ,  $\text{NO}_2$ ,  $\text{NHSO}_2\text{R}_5$ ,  $\text{SO}_2\text{R}_5$ , tetrazole or  $\text{X}_1\text{-R}_6\text{-X}_2$ , wherein  $\text{X}_1$  may be present or absent and if present is O, N,  $(\text{C}=\text{O})$ ,  $(\text{C}=\text{O})\text{NH}$ ,  $\text{NH}(\text{C}=\text{O})$ ,  $\text{SO}_2\text{NH}$ ,  $\text{NHSO}_2$ ,  $\text{R}_6$  is  $\text{C}_1$ -3 alkylene which may be substituted or unsubstituted and  $\text{X}_2$  is  $\text{CF}_3$ ,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ , H,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ ,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NHSO}_2\text{R}_5$ ,  $\text{NRR}_3$ ,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR,  $\text{SO}_2\text{R}_5$ , tetrazole;

each n is independently from 0 to 3;

ring B is an aryl, carbocyclic, heteroaryl, heterocyclic or phenyl ring which may be substituted or unsubstituted;

$\text{A}_1$  is a linkage in which the shortest path is 2-8 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen, sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be acylalkyl,

alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl,  
 alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl,  
 alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylarylalkoxy, alkylene,  
 alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkoxy,  
 5 alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-  
 sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl,  
 aminoalkylarylalkylamino, aminoalkylarylalkoxy, aminoalkyloxy, aminoaryl, aminoarylalkyl,  
 aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino,  
 aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl,  
 10 aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C-  
 amido, carbonylarylamino, carbonylarylcarbonyl, carbonylarylalkoxy, chromene, cycloalkylene,  
 disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole,  
 isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine,  
 piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole,  
 15 pyrrolidine, quinoline, sulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylarylalkoxy,  
 sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted  
 azeridine, or ureido which may be substituted or unsubstituted;

A<sup>2</sup> is a linkage in which the shortest path is 0-6 atoms in length wherein the atoms in  
 the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with  
 20 a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage  
 may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which  
 may be directly in the linkage or appended to the linkage; the linkage may be single atom C,  
 O, S or N which may be substituted or unsubstituted; the linkage may be acylalkyl,  
 alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl,  
 25 alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl,  
 alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylarylalkoxy, alkylene,  
 alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkoxy,  
 alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-  
 sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl,  
 30 aminoalkylarylalkylamino, aminoalkylarylalkoxy, aminoalkyloxy, aminoaryl, aminoarylalkyl,  
 aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino,

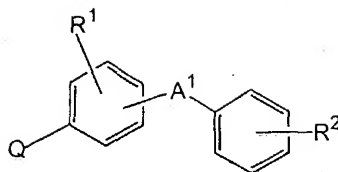
ortho or para aryldioxy, substituted meta-aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, furan, haloalkyl, imidazole, imidazolidine, 5 imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or 10 unsubstituted; and a pharmaceutically acceptable carrier or excipient.

40. The method of claim 39 wherein the mammal is a human.

15 41. The method of claim 39 wherein  
Q is  $\text{CF}_3\text{SO}_2$  or  $\text{CF}_3\text{SO}_2\text{NH}$ ;  
each R1 is independently  $\text{CF}_3$ ,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ , H, halo, NHR,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ ,  $\text{NHSO}_2\text{R}_5$ ,  $\text{NO}_2$ ,  $\text{O}(\text{C}=\text{O})\text{R}$ , OH, OR,  $\text{SO}_2\text{R}_5$  or tetrazole;  
each R2 is independently  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ ,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ , NHR, 20  $\text{NHSO}_2\text{R}_5$ ,  $\text{NO}_2$ ,  $\text{SO}_2\text{R}_5$ ,  $-\text{R}_6-(\text{C}=\text{O})\text{OR}$ ,  $-\text{R}_6-\text{NRR}_3$ ,  $-\text{R}_6$ -tetrazole or tetrazole;  
each n is independently from 0 to 2;  
ring B is phenyl or heteroaryl which may be substituted or unsubstituted; and  
linkage A1 is C1-C4 alkoxy, C2-C4 alkoxyalkyl, C2-C4 alkylenedioxy, C2-C4  
alkylaminoalkyl, C2-C4 alkylenediamine, C1-C4 C-amido, C1-C4 N-amido, C1-C4 ureido, 25 C0-C3 N-sulfonamido, C0-C3 S-sulfonamido, aryldioxy, aryldiamine, aryl, alkylarylalkyl, imidazole, oxazole, oxadiazole, pyrazole, pyrazolidine, pyrrole or triazole.

42. The method of claim 39 wherein the compound has the formula:





(IV)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is  $\text{CF}_3\text{SO}_2$  or  $\text{CF}_3\text{SO}_2\text{NH}$ ;

R1 is H or  $\text{NO}_2$ ;

R2 is  $(\text{C}=\text{O})\text{OR}$ ,  $\text{NHSO}_2\text{R}_5$  or  $\text{SO}_2\text{R}_5$ ; and

5 the linkage A1 is C2-C4 alkoxyalkyl, aryldioxy, aryl, alkylarylalkyl, C1-C4 N-amido or oxadiazole.

43. The method of claim 39 wherein the compound is:

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

10 4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;

N,N-Bis(4-trifluoromethylsulfonylbenzyl)benzamide;

1,2-Bis(4-trifluoromethylsulfonylphenyl)ethane;

N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;

N-(4-Trifluoromethylsulfonylbenzyl)benzamide;

15 Bis(4-Trifluoromethylsulfonylphenyl) disulfide;

Bis-(2-Nitro-4-trifluoromethylsulfonylphenyl) disulfide;

3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;

[3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl ester;

20 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;

1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;

4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl

ester;

4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;

25 4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;

1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-

1H-pyrazole-3-carboxylic acid methyl ester;

{4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-  
acetic acid ethyl ester;

4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;

{4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid  
5 ethyl ester;

*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

10 *N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonyl-  
phenoxy)-benzene;

[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine;

15 *N*-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)-  
acetamide;

2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl  
ester;

{2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

20 {3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

{4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;

3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;

*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-  
25 phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

30 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl  
ester;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;  
 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-  
 benzamide;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxy-  
 5 phenyl)-benzamide;

3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-  
 benzoic acid ethyl ester;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-yl-  
 ethyl)-benzamide;

10 *N*-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide;

1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;

[2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic  
 acid methyl ester;

*N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-  
 15 benzamide;

*N*-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-*N*-(2-hydroxy-  
 ethyl)-benzamide;

[2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-  
 acetic acid ethyl ester;

20 [2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic  
 acid ethyl ester;

[2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-  
 acetic acid ethyl ester;

*N*-Cyclohexyl-*N*-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-  
 25 phenyl)-methyl]-benzamide;

[2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic  
 acid ethyl ester;

[2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-  
 acetic acid ethyl ester;

30 {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-  
 acetic acid;

4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid;  
 2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;  
 1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine;  
 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine;  
 5 [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)-  
 amine;  
 1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-  
 ol;  
 [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-  
 10 amine;  
 1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-  
 ol;  
 4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-  
 benzenesulfonamide;  
 15 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-  
 benzenesulfonamide; or  
 Bis- {[4-(2-nitro-4-trifluoromethanesulfonyl)-phenoxy]-phenyl} sulfone.

44. The method of claim 39 wherein the compound is:

20 1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane;  
 1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane;  
 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane;  
 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane;  
 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane;  
 25 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;  
 1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene;  
 Bis(4-trifluoromethylsulfonamidophenyl) ether;  
 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;  
 2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole;  
 30 Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene;  
 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid;
- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;
- 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;
- 5 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic
- 10 acid;
- 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid;
- 4-{[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl}-benzoic acid;
- 15 (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid *tert*-butyl ester;
- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid;
- N,N*-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide;
- 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;
- 20 3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}-amino)-benzoic acid;
- 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl
- 25 ester;
- 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- 1-Carboxymethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic
- 30 acid ethyl ester;

1-*tert*-Butoxycarbonylmethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;

1-Carboxymethyl-5-(*N,N*- ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid;

5        1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;

1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or

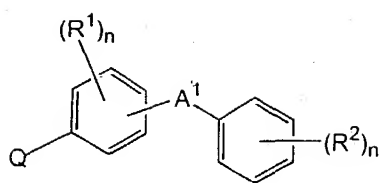
1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.

10        45.     The method of claim 39 wherein said cancer is a solid tumor.

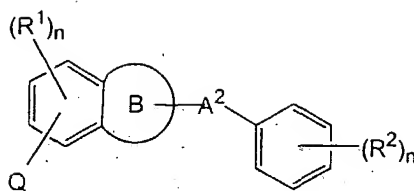
46.     The method of claim 39 wherein said cancer is selected from the group consisting of glioma, melanoma, adenocarcinoma, Kaposi's sarcoma and hemangioma.

15        47.     The method of claim 39 wherein said cancer is selected from the group consisting of ovarian, breast, lung, pancreatic, liver, prostate, colon, testicular, and epidermoid cancer.

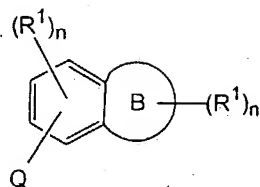
20        48.     A method for regulating, inhibiting or modulating protein tyrosine phosphatase signal transduction in a cell which comprises administering to the cell an effective amount of a compound having the formula:



(I)



(II)



(III)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

Q is  $\text{CF}_3\text{SO}_2$ ,  $\text{CF}_3\text{SO}_2\text{NR}^3$ ,  $\text{CF}_3\text{SO}_2\text{R}^4$  or  $\text{CF}_3\text{SO}_2\text{N}(\text{R}^3)\text{R}^4$ , wherein  $\text{R}^3$  is H, alkoxy, acyl or  $\text{C}_1\text{-C}_3$  alkyl, each of which may be substituted or unsubstituted, and  $\text{R}^4$  is methylene which may be substituted or unsubstituted;

5 each  $\text{R}^1$  is independently  $\text{C}_1\text{-C}_3$  alkyl,  $\text{C}_1\text{-C}_3$  haloalkyl, CN,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ , H, halo, NHR,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ ,  $\text{NO}_2$ ,  $\text{NHSO}_2\text{R}_5$ ,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR, OH,  $\text{SO}_2\text{R}_5$ ,  $\text{R}_4\text{SO}_2\text{CF}_3$  or tetrazole, wherein  $\text{R}_5$  is  $\text{CF}_3$ ,  $\text{C}_1\text{-C}_3$  alkyl, NHR and wherein R is H,  $\text{C}_1\text{-C}_3$  alkyl, aryl or heteroaryl, which may be substituted or unsubstituted;

10 each  $\text{R}^2$  is independently  $\text{C}_1\text{-C}_3$  alkyl,  $\text{C}_1\text{-C}_3$  haloalkyl, CN,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ , H, halo,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR, OH, NHR,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ ,  $\text{NO}_2$ ,  $\text{NHSO}_2\text{R}_5$ ,  $\text{SO}_2\text{R}_5$ , tetrazole, or  $\text{X}_1\text{-R}_6\text{-X}_2$  wherein  $\text{X}_1$  may be present or absent and if present is O, N,  $(\text{C}=\text{O})$ ,  $(\text{C}=\text{O})\text{NH}$ ,  $\text{NH}(\text{C}=\text{O})$ ,  $\text{SO}_2\text{NH}$ ,  $\text{NHSO}_2$ ,  $\text{R}_6$  is  $\text{C}_1\text{-C}_3$  alkylene which may be substituted or unsubstituted and  $\text{X}_2$  is  $\text{CF}_3$ ,  $(\text{C}=\text{O})\text{OR}$ ,  $(\text{C}=\text{O})\text{R}_5$ , H,  $\text{NH}(\text{C}=\text{O})\text{R}_5$ ,  $\text{NH}(\text{C}=\text{O})\text{OR}$ ,  $\text{NHSO}_2\text{R}_5$ ,  $\text{NRR}_3$ ,  $\text{O}(\text{C}=\text{O})\text{R}$ , OR,  $\text{SO}_2\text{R}_5$ , tetrazole;

15 each n is independently from 0 to 3;

ring B is an aryl, carbocyclic, heteroaryl, heterocyclic or phenyl ring which may be substituted or unsubstituted;

$\text{A}^1$  is a linkage in which the shortest path is 2-8 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be acylalkyl,

alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino, aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, disulfide, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted;

$A^2$  is a linkage in which the shortest path is 0-6 atoms in length wherein the atoms in the linkage are carbon which may be substituted or unsubstituted or the carbon replaced with a single nitrogen, oxygen or sulfur, or combination of nitrogen, oxygen and sulfur; the linkage may be or may contain an aryl, carbocyclic, heteroaryl, heterocyclic or a phenyl ring, which may be directly in the linkage or appended to the linkage; the linkage may be single atom C, O, S or N which may be substituted or unsubstituted; the linkage may be acylalkyl, alkenylene, alkoxy, alkoxyalkyl, alkoxyamino, alkoxyarylalkoxy, alkoxyarylalkyl, alkoxyarylamino, alkoxyaryloxyalkyl, alkylamino, alkylaminoalkyl, alkylaminoarylaminoalkyl, alkylaryl, alkylarylalkyl, alkylarylamino, alkylaryloxy, alkylene, alkylenediamine, alkylenedioxy, alkyloxy, alkyloxyaryl, alkyloxyarylalkyloxy, alkyloxyaryloxyalkyl, alkylsulfonylamino, alkylthio, alkylthioalkyl, alkynylene, N-sulfonamido, N-amido, aminoalkyl, aminoalkylamino, aminoalkylarylalkyl, aminoalkylarylalkylamino, aminoalkylaryloxy, aminoalkyloxy, aminoaryl, aminoarylalkyl, aminoarylcarbonyl, aminoaryloxy, aminoaryloxyalkyl, aminoarylsulfonyl, aryl, arylamino,



ortho or para aryldioxy, substituted meta-aryldioxy, aryldiamine, aryloxy, aryloxyalkyl, aryloxyamino, aryloxyaminoalkyl, aryloxycarbonyl, aryloxysulfonyl, benzimidazole, benzo[b]furan, benzo[b]thiophene, C-amido, carbonylarylamino, carbonylarylcarbonyl, carbonylaryloxy, chromene, cycloalkylene, furan, haloalkyl, imidazole, imidazolidine, imidazoline, indole, isothiazole, isoxazole, morpholine, oxadiazole, oxazole, oxirane, parathiazine, phenothiazine, piperazine, piperidine, purine, pyran, pyrazine, pyrazole, pyrazolidine, pyrimidine, pyridine, pyrrole, pyrrolidine, quinoline, sulfonamido, sulfonylalkyl, sulfonylarylamino, sulfonylaryloxy, sulfonylarylsulfonyl, thiadiazole, thiazole, thiophene, triazine, triazole, unsubstituted azeridine, ureido, which may be substituted or unsubstituted

wherein said compound regulates, inhibits or modulates protein tyrosine phosphatase signal transduction.

49. A method for inhibiting, regulating or modulating the activity of a phosphate binding protein in a cell which comprises contacting the cell with an effective amount of a compound with a molecular weight less than 2000 daltons, or a pharmaceutically acceptable salt or solvate thereof, wherein the compound contains at least one functional group selected from the group consisting of  $C(R^{11})F_aSO_bZ^-$ , and  $R^{12}SO_bC(R^{11})F_m^-$ ;

wherein a is 1, 2 or 3 and b is 1 or 2 and m is 1 or 2;

Z is C or N;

wherein  $R^{11}$  is present or absent and if present is independently H, halo, C1-C4 alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl or C<sub>1</sub>-C<sub>4</sub> haloalkyl, which may be substituted or unsubstituted;

wherein  $R^{12}$  is C1-C3 haloalkyl, C1-C3 alkyl which may be substituted or unsubstituted, or N which may be substituted or unsubstituted;

wherein the compound regulates, inhibits or modulates the activity of the phosphate binding protein.

50. The method of claim 49 wherein the compound has the formula

$C(R^{11})F_aSO_bZR^{13}$  or  $R^{12}SO_bC(R^{11})F_mR^{13}$ ,

wherein  $ZR^{13}$  or  $R^{13}$  is an amide, an amine, an ester, an ether, a monocyclic heterocycle, a polycyclic heterocycle, an acyclic hydrocarbon, a monocyclic aliphatic

hydrocarbon, a polycyclic aliphatic hydrocarbon, a monocyclic aromatic hydrocarbon, a polycyclic aromatic hydrocarbon, a macrocycle, a nucleoside, a nucleotide, an oligoamide, an oligoamine, an oligoester, an oligoether, an oligonucleotide, an oligosaccharide, an oligourea, an oligourethane, a peptide, a peptide oligomer, a saccharide, a steroid, a urea, a urethane, which may be substituted or unsubstituted.

51. The method of claim 50, wherein the compound has the formula  $\text{CF}_3\text{SO}_2-$ ,  $\text{CF}_3\text{SO}_2\text{N}-$ ,  $\text{CF}_3\text{SO}_2\text{C}-$ ,  $\text{CF}_3\text{SO}_2\text{CO}-$ ,  $\text{CF}_3\text{SO}_2\text{CN}-$ ,  $\text{CF}_3\text{CF}_2\text{SO}_2-$  or  $\text{CHF}_2\text{SO}_2-$ .

52. The method of claim 51, wherein the compound is:  
 2-[4-(Difluoro-methanesulfonyl)-phenyl]-5-naphthalen-2-yl-oxazole;  
 [2-Nitro-4-(1,1,2,2-tetrafluoro-ethanesulfonyl)-phenyl]-*p*-tolyl-amine;  
 Bis(4-Trifluoromethylsulfonylbenzyl) ether;  
 4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;  
 N,N-Bis(4-trifluoromethylsulfonylbenzyl)benzamide;  
 1,2-Bis(4-trifluoromethylsulfonylphenyl)ethane;  
 N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;  
 N-(4-Trifluoromethylsulfonylbenzyl)benzamide;  
 Bis(4-Trifluoromethylsulfonylphenyl) disulfide;  
 Bis-(2-Nitro-4-trifluoromethylsulfonylphenyl) disulfide;  
 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;  
 [3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl ester;  
 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;  
 1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;  
 4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;  
 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;  
 4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;  
 1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-1*H*-pyrazole-3-carboxylic acid methyl ester;

{4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-  
acetic acid ethyl ester;

4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;

{4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid  
5 ethyl ester;

*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

10 *N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonyl-  
phenoxy)-benzene;

[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine;

15 *N*-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)-  
acetamide;

2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl  
ester;

{2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

20 {3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

{4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;

3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;

25 *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-  
phenylcarbamoyl)-methyl]-phenyl}-acetamide;

30 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl  
ester;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;  
4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-  
benzamide;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxy-  
5 phenyl)-benzamide;

3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-  
benzoic acid ethyl ester;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-yl-  
ethyl)-benzamide;

10 *N*-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide;

1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;

[2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic  
acid methyl ester;

*N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-  
15 benzamide;

*N*-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-*N*-(2-hydroxy-  
ethyl)-benzamide;

[2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-  
acetic acid ethyl ester;

20 [2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic  
acid ethyl ester;

[2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-  
acetic acid ethyl ester;

*N*-Cyclohexyl-*N*-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-  
25 phenyl)-methyl]-benzamide;

[2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic  
acid ethyl ester;

[2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-  
acetic acid ethyl ester;

30 {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-  
acetic acid;

- 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid;
- 2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;
- 1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine;
- 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine;
- 5 [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)-amine;
- 1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-ol;
- [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-
- 10 amine;
- 1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-ol;
- 4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-benzenesulfonamide;
- 15 4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-benzenesulfonamide;
- Bis-{{[4-(2-nitro-4-trifluoromethanesulfonyl)-phenoxy]-phenyl}sulfone};
- 1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane;
- 1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane;
- 20 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane;
- 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane;
- 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane;
- 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
- 1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene;
- 25 Bis(4-trifluoromethylsulfonamidophenyl) ether;
- 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
- 2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole;
- Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene;
- 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- 30 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid;

- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;  
 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;  
 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-  
 benzoic acid;  
 5 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;  
 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;  
 4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic  
 acid;  
 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic  
 10 acid;  
 4-{[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl}-  
 benzoic acid;  
 (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid *tert*-butyl ester;  
 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;  
 15 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid;  
*N,N*-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide;  
 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;  
 3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}-  
 amino)-benzoic acid;  
 20 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-  
 carboxylic acid ethyl ester;  
 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl  
 ester;  
 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-  
 25 carboxylic acid;  
 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;  
 1-Carboxymethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic  
 acid ethyl ester;  
 1-*tert*-Butoxycarbonylmethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-  
 30 carboxylic acid ethyl ester;

1-Carboxymethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid;

1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;

5 1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or

1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.

53. The method of claim 50 wherein  $ZR^{13}$  or  $R^{13}$  is a monocyclic heterocycle, a polycyclic heterocycle, a monocyclic aromatic hydrocarbon, a polycyclic aromatic hydrocarbon which may be substituted or unsubstituted.

54. The method of claim 49 wherein Z is methylene which may be substituted or unsubstituted.

15 55. The method of claim 49 wherein Z is N which may be substituted or unsubstituted.

56. The method of claim 49 wherein the molecular weight of the compound is less than 1000 daltons.

20

57. The method of claim 56 wherein the molecular weight of the compound is less than 650 daltons.

58. The method of claim 49 wherein the phosphate binding protein is a phosphohistidine, phosphoserine, phosphothreonine or phosphotyrosine binding protein.

25

59. The method of claim 49 wherein the phosphate binding protein is an enzyme.

60. The method of claim 59 wherein the enzymatic phosphate binding protein forms a covalent phosphocysteine intermediate.

30

61. The method of claim 59 wherein the enzymatic phosphate binding protein is a metalloproteinase.

62. The method of claim 59 wherein the enzymatic phosphate binding protein is a  
5 phosphatase.

63. The method of claim 59 wherein the enzymatic phosphate binding protein is a kinase.

10 64. The method of claim 63 wherein the kinase is a histidine kinase, a serine kinase, a threonine kinase or a tyrosine kinase.

65. The method of claim 49 wherein the activity of the phosphate binding protein is associated with protein tyrosine phosphatase signal transduction.

15

66. The method of claim 49 wherein the phosphate binding protein is a dual-specificity phosphatase, a histidine/lysine phosphatase, low-molecular weight phosphatase, a phosphotyrosine binding (PTB) domain, a pleckstrin homology domain, a Ser/Thr phosphatase, a Src homology 2 (SH2) domain, a protein tyrosine phosphatase, or a tyrosine-specific phosphatase.  
20

67. The method of claim 62 wherein the phosphatase is Alpha phosphatase, Beta phosphatase, cdc25 phosphatase, cdi phosphatase, CD45 phosphatase, DEP1 phosphatase, Epsilon phosphatase, LAR phosphatase, MAP kinase phosphatase, MEG2 phosphatase, Mu  
25 phosphatase, 1B phosphatase, PEST phosphatase, PP2  $\beta$  (calcineurin) phosphatase, SHP1 phosphatase, SHP2 phosphatase, Sigma phosphatase, T-cell phosphatase, VH1-like phosphatase, VHR phosphatase, Yersinia phosphatase, or Zeta phosphatase.

68. The method of claim 49 wherein the activity of the phosphate binding protein  
30 is determined by activity in an *in vitro* assay.



69. The method of claim 49 wherein the cell is a mammalian cell.

70. The method of claim 69 wherein the mammalian cell is a human cell.

71. A method for treating a disease, in a mammal, associated with a phosphate binding protein which comprises administering to a mammal in need thereof a therapeutically effective amount of a compound with a molecular weight less than 2000 daltons, or a pharmaceutically acceptable salt or solvate thereof, wherein the compound contains at least one functional group selected from the group consisting of  $C(R^{11})F_aSO_bZ^-$ , and

$R^{12}SO_bC(R^{11})F_m^-$ ;

wherein a is 1, 2 or 3 and b is 1 or 2 and m is 1 or 2;

Z is C or N;

wherein  $R^{11}$  may be present or absent and if present is independently H, halo, C1-C4 alkyl, C2-C4 alkenyl or C1-C4 haloalkyl, which may be substituted or unsubstituted;

wherein  $R^{12}$  is C1-C3 haloalkyl, C1-C3 alkyl which may be substituted or unsubstituted, or N which may be substituted or unsubstituted;

wherein the compound treats the disease associated with the phosphate binding protein in the mammal.

72. The method of claim 71, wherein the compound has the formula  $CF_3SO_2^-$ ,  $CF_3SO_2N^-$ ,  $CF_3SO_2C^-$ ,  $CF_3SO_2CO^-$ ,  $CF_3SO_2CN^-$ ,  $CF_3CF_2SO_2^-$  or  $CHF_2SO_2^-$ .

73. The method of claim 72, wherein the compound is:

2-[4-(Difluoro-methanesulfonyl)-phenyl]-5-naphthalen-2-yl-oxazole;

[2-Nitro-4-(1,1,2,2-tetrafluoro-ethanesulfonyl)-phenyl]-p-tolyl-amine;

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;

N,N-Bis(4-trifluoromethylsulfonylbenzyl)benzamide;

1,2-Bis(4-trifluoromethylsulfonylphenyl)ethane;

N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;

N-(4-Trifluoromethylsulfonylbenzyl)benzamide;

Bis(4-Trifluoromethylsulfonylphenyl) disulfide;  
 Bis-(2-Nitro-4-trifluoromethylsulfonylphenyl) disulfide;  
 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;  
 [3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl  
 5 ester;  
 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;  
 1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;  
 4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl  
 ester;  
 10 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;  
 4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;  
 1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-  
 1*H*-pyrazole-3-carboxylic acid methyl ester;  
 {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-  
 15 acetic acid ethyl ester;  
 4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;  
 {4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid  
 ethyl ester;  
*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonyl-  
 20 phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-  
 phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
*N*-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonyl-  
 phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
 25 3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonyl-  
 phenoxy)-benzene;  
 [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine;  
*N*-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)-  
 acetamide;  
 30 2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl  
 ester;

- {2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;  
 {3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;  
 {4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;  
 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;  
 5 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;  
*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
 10 *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;  
 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl ester;  
 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;  
 15 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-benzamide;  
 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxy-phenyl)-benzamide;  
 3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-  
 20 benzoic acid ethyl ester;  
 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-yl-ethyl)-benzamide;  
*N*-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide;  
 1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;  
 25 [2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic acid methyl ester;  
*N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;  
*N*-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-*N*-(2-hydroxy-ethyl)-benzamide;  
 30

[2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-  
acetic acid ethyl ester;

[2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic  
acid ethyl ester;

5 [2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-  
acetic acid ethyl ester;

*N*-Cyclohexyl-*N*-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-  
phenyl)-methyl]-benzamide;

[2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-acetic  
10 acid ethyl ester;

[2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetyl-amino]-  
acetic acid ethyl ester;

{4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-  
acetic acid;

15 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid;  
2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;  
1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine;  
4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine;  
[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)-

20 amine;  
1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-  
ol;

[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-  
amine;

25 1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-  
ol;

4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-  
benzenesulfonamide;

4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-  
30 benzenesulfonamide;

Bis- {[4-(2-nitro-4-trifluoromethanesulfonyl)-phenoxy]-phenyl} sulfone;.

- 1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane;
- 1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane;
- 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane;
- 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane;
- 5 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane;
- 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
- 1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene;
- Bis(4-trifluoromethylsulfonamidophenyl) ether;
- 1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;
- 10 2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole;
- Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene;
- 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;
- (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid;
- 15 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;
- 5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;
- 3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 20 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;
- 4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid;
- 3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic acid;
- 25 4-[[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl]-benzoic acid;
- (2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid *tert*-butyl ester;
- 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;
- 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid;
- 30 *N,N*-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide;
- 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;

3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}-amino)-benzoic acid;

1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;

5 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;

1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

10 1-Carboxymethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;

1-*tert*-Butoxycarbonylmethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid ethyl ester;

15 1-Carboxymethyl-5-(*N,N*- ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic acid;

1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;

1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or

1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.

20

74. The method of claim 71 wherein the phosphate binding protein is associated with cancer, a solid tumor, glioma, melanoma, Kaposi's sarcoma, hemangioma, ovarian cancer, breast cancer, lung cancer, pancreatic cancer, liver cancer, prostate cancer, colon cancer, or epidermoid cancer.

25

75. The method of claim 71 wherein the phosphate binding protein is associated with diabetes.

76. The method of claim 71 wherein the phosphate binding protein is associated  
30 with neurological degenerative diseases.

77. The method of claim 71 wherein the phosphate binding protein is associated with osteoporosis.

78. The method of claim 71 wherein the phosphate binding protein is associated with a lymphatic function.

79. The method of claim 76 wherein the phosphate binding protein is CD45.

80. The method of claim 71, 72, 73, 74, 75 or 76 wherein the mammal is a human.

10

81. A method for treating cancer in a mammal which comprises administering to a mammal in need thereof a therapeutically effective amount of a compound with a molecular weight less than 2000 daltons, or a pharmaceutically acceptable salt or solvate thereof, wherein the compound contains at least one functional group selected from the group consisting of  $C(R^{11})F_aSO_bZ-$ , and  $R^{12}SO_bC(R^{11})F_m-$ ;

15

wherein a is 1, 2 or 3 and b is 1 or 2 and m is 1 or 2;

Z is C or N;

wherein  $R^{11}$  may be present or absent and if present is independently H, halo, C1-C4 alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl or C<sub>1</sub>-C<sub>4</sub> haloalkyl, which may be substituted or unsubstituted;

20

wherein  $R^{12}$  is C1-C3 haloalkyl, C1-C3 alkyl which may be substituted or unsubstituted, or N which may be substituted or unsubstituted.

82. The method of claim 81, wherein the compound has the formula  $CF_3SO_2-$ ,  $CF_3SO_2N-$ ,  $CF_3SO_2C-$ ,  $CF_3SO_2CO-$ ,  $CF_3SO_2CN-$ ,  $CF_3CF_2SO_2-$  or  $CHF_2SO_2-$ .

25

83. The method of claim 82, wherein the compound is:

2-[4-(Difluoro-methanesulfonyl)-phenyl]-5-naphthalen-2-yl-oxazole;

[2-Nitro-4-(1,1,2,2-tetrafluoro-ethanesulfonyl)-phenyl]-p-tolyl-amine;

Bis(4-Trifluoromethylsulfonylbenzyl) ether;

30

4-Trifluoromethylsulfonylbenzyl 4-trifluoromethylsulfonylphenyl ether;

N,N-Bis(4-trifluoromethylsulfonylbenzyl)benzamide;

- 1,2-Bis(4-trifluoromethylsulfonylphenyl)ethane;
- N-(4-Trifluoromethylsulfonylbenzyl)-4-trifluoromethylsulfonylbenzamide;
- N-(4-Trifluoromethylsulfonylbenzyl)benzamide;
- Bis(4-Trifluoromethylsulfonylphenyl) disulfide;
- 5 Bis-(2-Nitro-4-trifluoromethylsulfonylphenyl) disulfide;
- 3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
- [3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-phenyl]-acetic acid methyl ester;
- 3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
- 10 1,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-cyclopentane;
- 4-Methyl-2,6-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzoic acid methyl ester;
- 4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid methyl ester;
- 4-[3-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;
- 15 1-(3,5-Bis-trifluoromethyl-phenyl)-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-1H-pyrazole-3-carboxylic acid methyl ester;
- {4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester;
- 4-[3-(4-Trifluoromethanesulfonyl-phenoxy)-phenoxy]-benzoic acid;
- 20 {4-[4-(4-Trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid ethyl ester;
- N-(3-Trifluoromethanesulfonyl-phenyl)-2-{2-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
- N-(3-Trifluoromethanesulfonyl-phenyl)-2-{3-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
- 25 N-(3-Trifluoromethanesulfonyl-phenyl)-2-{4-[(3-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;
- 3,6-Bis-(morpholin-4-ylmethyl)-2,5-bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzene;
- 30 [2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-dimethyl-amine;



*N*-(2-Ethylamino-5-trifluoromethanesulfonyl-phenyl)-2-(4-methanesulfonyl-phenyl)-acetamide;

2-Hydroxy-5-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;

5 {2-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

{3-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

{4-[(3-Trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetic acid;

3,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-benzamide;

3,5-Bis-(4-trifluoromethanesulfonyl-phenoxy)-benzoic acid;

10 *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{2-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;

*N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{3-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;

15 *N*-(4-Trifluoromethanesulfonyl-phenyl)-2-{4-[(4-trifluoromethanesulfonyl-phenylcarbamoyl)-methyl]-phenyl}-acetamide;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid methyl ester;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoic acid;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-pyridin-4-yl-

20 benzamide;

4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(4-methoxy-phenyl)-benzamide;

3-[4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzoylamino]-benzoic acid ethyl ester;

25 4-(1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-*N*-(2-pyrrolidin-1-yl-ethyl)-benzamide;

*N*-Ethyl-4-(1-ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazol-2-yl)-benzamide;

1-Ethyl-5-trifluoromethanesulfonyl-1*H*-benzoimidazole-2-carboxylic acid;

[2-(Benzoyl-butyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetylamino]-acetic

30 acid methyl ester;

*N*-Benzyl-*N*-[butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;

*N*-[Butylcarbamoyl-(4-trifluoromethanesulfonyl-phenyl)-methyl]-*N*-(2-hydroxyethyl)-benzamide;

5 [2-(Acetyl-cyclopropyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetlamino]-acetic acid ethyl ester;

[2-(Acetyl-methyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetlamino]-acetic acid ethyl ester;

10 [2-(Benzoyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetlamino]-acetic acid ethyl ester;

*N*-Cyclohexyl-*N*-[(2,6-dimethyl-phenylcarbamoyl)-(4-trifluoromethanesulfonyl-phenyl)-methyl]-benzamide;

[2-(Acetyl-propyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetlamino]-acetic acid ethyl ester;

15 [2-(Acetyl-cyclohexyl-amino)-2-(4-trifluoromethanesulfonyl-phenyl)-acetlamino]-acetic acid ethyl ester;

{4-[4-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-benzenesulfonyl]-phenoxy}-acetic acid;

4-[2-(2-Nitro-4-trifluoromethanesulfonyl-phenoxy)-ethoxy]-benzoic acid;

20 2,5-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-terephthalic acid diethyl ester;

1-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-piperidine;

4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-morpholine;

[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(2-nitro-phenyl)-amine;

25 1-(2-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-ol;

[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propyl]-(4-nitro-phenyl)-amine;

30 1-(4-Nitro-phenylamino)-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propan-2-ol;

4-[2-Hydroxy-3-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-  
benzenesulfonamide;

4-[2,3-Bis-(2-nitro-4-trifluoromethanesulfonyl-phenoxy)-propylamino]-  
benzenesulfonamide;

5 Bis- {[4-(2-nitro-4-trifluoromethanesulfonyl)-phenoxy]-phenyl} sulfone;

1,2-Bis(4-trifluoromethylsulfonamidophenyl)ethane;

1,2-Bis(2-methyl-4-trifluoromethylsulfonamidophenyl)ethane;

1,3-Bis(4-trifluoromethylsulfonamidophenoxy)-2,2-dimethylpropane;

1,3-Bis(4-trifluoromethylsulfonamidophenoxy)propane;

10 1,4-Bis(4-trifluoromethylsulfonamidophenoxy)butane;

1,4-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;

1-(4-Aminophenoxy)-4-trifluoromethylsulfonamidophenoxy benzene;

Bis(4-trifluoromethylsulfonamidophenyl) ether;

1,3-Bis(4-trifluoromethylsulfonamidophenoxy)benzene;

15 2,5-Bis(4-trifluoromethylsulfonamidophenyl)-(1,3,4)oxadiazole;

Bis(4-trifluoromethylsulfonamidophenyl)-1,4-diisopropylbenzene;

5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;

(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid;

20 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;

5-Trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid phenylamide;

3-[(1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-

benzoic acid;

3-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;

25 4-[(5-Trifluoromethanesulfonylamino-1*H*-indole-2-carbonyl)-amino]-benzoic acid;

4-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic

acid;

3-[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-benzoic

acid;

30 4- {[2-(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetylamino]-methyl}-

benzoic acid;

(2-Methyl-5-trifluoromethanesulfonylamino-indol-1-yl)-acetic acid *tert*-butyl ester;  
 1-Methyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl ester;  
 6-Trifluoromethanesulfonylamino-naphthalene-2-carboxylic acid;  
*N,N*-Bis[(6-carboxyl-naphthalen-2-yl)methyl] trifluoromethanesulfonamide;  
 5 6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carboxylic acid;  
 3-({6-[(Methyl-trifluoromethanesulfonyl-amino)-methyl]-naphthalene-2-carbonyl}-  
 amino)-benzoic acid;  
 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-  
 carboxylic acid ethyl ester;  
 10 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid ethyl  
 ester;  
 1-*tert*-Butoxycarbonylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-  
 carboxylic acid;  
 1-Carboxymethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid;  
 15 1-Carboxymethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic  
 acid ethyl ester;  
 1-*tert*-Butoxycarbonylmethyl-5-(*N,N*-ditrifluoromethanesulfonyl)amino-1*H*-indole-2-  
 carboxylic acid ethyl ester;  
 1-Carboxymethyl-5-(*N,N*- ditrifluoromethanesulfonyl)amino-1*H*-indole-2-carboxylic  
 20 acid;  
 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid  
 ethyl ester;  
 1-Benzyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid; or  
 1-Cyclohexylmethyl-5-trifluoromethanesulfonylamino-1*H*-indole-2-carboxylic acid.

25 84. The method of claim 81 wherein the mammal is a human.

85. The method of claim 81 wherein the cancer is a solid tumor.

30 86. The method of claim 84 wherein the cancer is glioma, melanoma,  
 adenocarcinoma, Kaposi's sarcoma or hemangioma.

87. The method of claim 81 wherein the cancer is ovarian, breast, lung, pancreatic, liver, prostate, colon, testicular or epidermoid cancer.

5 88. A method for preventing cancer in a mammal which comprises administering to a mammal in need thereof a therapeutically effective amount of a compound with a molecular weight less than 2000 daltons, or a pharmaceutically acceptable salt or solvate thereof, wherein the compound contains at least one functional group selected from the group consisting of  $C(R^{11})F_aSO_bZ-$ , and  $R^{12}SO_bC(R^{11})F_m-$ ;

10 wherein a is 1, 2 or 3 and b is 1 or 2 and m is 1 or 2;

Z is C or N;

wherein  $R^{11}$  may be present or absent and if present is independently H, halo, C1-C4 alkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl or C<sub>1</sub>-C<sub>4</sub> haloalkyl, which may be substituted or unsubstituted;

15 wherein  $R^{12}$  is C1-C3 haloalkyl, C1-C3 alkyl which may be substituted or unsubstituted, or N which may be substituted or unsubstituted.

89. A method of inhibiting phosphatase activity which comprises contacting a mammalian cell having a phosphatase with a compound having a molecular weight of less than 2000 daltons, wherein said compound is a non-ionic trifluoromethylsulfonyl or  
20 trifluoromethyl sulfonamide compound.